

## SEQUENCE LISTING

<110> Schmidt, James J.  
Stafford, Robert G.

<120> High Throughput Assays for the Proteolytic Activities  
of Clostridial Neurotoxins

<130> 003/224/SAP

<140> 09/962,360

<141> 2000-09-25

<150> US 60/235,050

<151> 2001-09-25

<160> 12

<170> Apple Macintosh Microsoft Word 6.0

<210> 1

<211> 17

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic peptide chosen such that it is cleaved by  
BoNT A

<220>

<221> misc\_feature

<222> 8 and 14

<223> Xaa at 8 is N(epsilon)-2,4-(dinitrophenyl)-lysine and  
Xaa at 14 is S-(fluresceinyl)-cysteine

<400> 1

Ser Asn Arg Thr Arg Ile Asp Xaa Ala Asn Gln Arg Ala Xaa Arg  
1 5 10 15

Met Leu

<210> 2

<211> 17

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic peptide chosen such that it is cleaved by

BoNT A

<220>

<221> misc\_feature

<222> 11 and 14

<223> Xaa at 11 is N(epsilon)-2,4-(dinitrophenyl)-lysine and  
Xaa at 14 is S-(7-dimethylamino-4-methyl-coumarin-3-  
carboxamidomethyl)-cysteine

<400> 2

Ser Asn Arg Thr Arg Ile Asp Glu Ala Asn Xaa Arg Ala Xaa Arg  
1                       5                                   10                           15

Met Leu

<210> 3

<211> 35

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic peptide chosen such that it is cleaved by

BoNT B

<220>

<221> misc\_feature

<222> 14 and 20

<223> Xaa at 14 is N(epsilon)-2,4-(dinitrophenyl)-lysine and  
Xaa at 20 is S-(fluresceinyl)-cysteine

<400> 3

Leu Ser Glu Leu Asp Asp Arg Ala Asp Ala Leu Gln Ala Xaa Ala  
1 5 10 15

Ser Gln Phe Glu Xaa Ser Ala Ala Lys Leu Lys Arg Lys Tyr Trp  
20 25 30

Trp Lys Asn Leu Lys  
35

<210> 4

<211> 35

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic peptide chosen such that it is cleaved by  
BoNT B

<220>

<221> misc\_feature

<222> 17 and 20

<223> Xaa at 17 is N(epsilon)-2,4-(dinitrophenyl)-lysine and  
Xaa at 20 is S-(7-dimethylamino-4-methyl-coumarin-3-  
carboxamidomethyl)-cysteine

<400> 4

Leu Ser Glu Leu Asp Asp Arg Ala Asp Ala Leu Gln Ala Gly Ala  
1 5 10 15

Ser Xaa Phe Glu Xaa Ser Ala Ala Lys leu Lys Arg Lys Tyr Trp  
20 25 30

Trp Lys Asn Leu Lys  
35

<210> 5

<211> 39

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic peptide chosen such that it is cleaved by  
BoNT D or BoNT F

<220>

<221> misc\_feature

<222> 19 and 25

<223> Xaa at 19 is N(epsilon)-2,4-(dinitrophenyl)-lysine and  
Xaa at 25 is S-(fluresceinyl)-cysteine

<400> 5

Ala	Gln	Val	Asp	Glu	Val	Val	Asp	Ile	Met	Arg	Val	Asn	Val	Asp
1				5					10					15
Lys	Val	Leu	Xaa	Arg	Asp	Gln	Lys	Leu	Xaa	Glu	Leu	Asp	Asp	Arg
					20				25					30
Ala	Asp	Ala	Leu	Gln	Ala	Gly	Ala	Ser						
				35										

<210> 6

<211> 39

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic peptide chosen such that it is cleaved by  
BoNT D or BoNT F

<220>

<221> misc\_feature

<222> 22 and 25

<223> Xaa at 22 is N(epsilon)-2,4-(dinitrophenyl)-lysine and  
Xaa at 25 is S-(7-dimethylamino-4-methyl-coumarin-3-  
carboxamidomethyl)-cysteine

<400> 6

<210> 7

<211> 39

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic peptide chosen such that it is cleaved by BoNT D or BoNT F

<220>

<221> misc\_feature

<222> 22 and 25

<223> Xaa at 22

Xaa at 25 is 2-amino-3-(7-methoxycoumarin-4-yl)-propionic acid

<400>

<210> 8

<211> 24

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic peptide chosen such that it is cleaved by  
BoNT A

<220>

<221> misc\_feature

<222> 1

<223> Xaa at 1 is N-fluoresceinyl-glycine

<400> 8

Xaa Gly Gly Ser Asn Arg Thr Arg Ile Asp Glu Ala Asn Gln Arg  
1 5 10 15  
Ala Thr Arg Met Leu Gly Gly Gly Cys  
20

<210> 9

<211> 42

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic peptide chosen such that it is cleaved by  
BoNT B

<220>

<221> misc\_feature

<222> 1

<223> Xaa at 1 is N-fluoresceinyl-glycine

<400> 9

Xaa Gly Gly Leu Ser Glu Leu Asp Asp Arg Ala Asp Ala Leu Gln

1	5	10	15											
Ala	Gly	Ala	Ser	Gln	Phe	Glu	Thr	Ser	Ala	Ala	Lys	Leu	Lys	Arg
				20				25					30	
Lys	Tyr	Trp	Trp	Lys	Asn	Leu	Lys	Gly	Gly	Gly	Cys			
				35				40						

<210> 10

<211> 46

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic peptide chosen such that it is cleaved by  
BoNT D or BoNT F

<220>

<221> misc\_feature

<222> 1

<223> Xaa at 1 is N-fluresceinyl-glycine

<400> 10

1	5	10	15											
Xaa	Gly	Gly	Ala	Gln	Val	Asp	Glu	Val	Val	Asp	Ile	Met	Arg	Val
Asn	Val	Asp	Lys	Val	Leu	Glu	Arg	Asp	Gln	Lys	leu	Ser	Glu	Leu
				20				25					30	
Asp	Asp	Arg	Ala	Asp	Ala	Leu	Gln	Ala	Gly	Ala	Ser	Gly	Gly	
				35				40					45	
Cys														

<210> 11

<211> 116

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic peptide chosen such that it is cleaved by  
BoNT E

<220>

<221> misc\_feature

<222> 1

<223> Xaa at 1 is S-fluoresceinyl-cysteine

<400> 11

Xaa	Asn	Lys	Leu	Lys	Ser	Ser	Asp	Ala	Tyr	Lys	Lys	Ala	Trp	Gly
1				5					10					15
Asn	Asn	Gln	Asp	Gly	Val	Val	Ala	Ser	Gln	Pro	Ala	Arg	Val	Val
				20					25					30
Asp	Glu	Arg	Glu	Gln	Met	Ala	Ile	Ser	Gly	Gly	Phe	Ile	Arg	Arg
	35							40						45
Val	Thr	Asn	Asp	Ala	Arg	Glu	Asn	Glu	Met	Asp	Glu	Asn	Leu	Glu
				50				55						60
Gln	Val	Ser	Gly	Ile	Ile	Gly	Asn	Leu	Arg	His	Met	Ala	Leu	Asp
	65							70						75
Met	Gly	Asn	Glu	Ile	Asp	Thr	Gln	Asn	Arg	Gln	Ile	Asp	Arg	Ile
	80							85						90
Met	Glu	Lys	Ala	Asp	Ser	Asn	Lys	Thr	Arg	Ile	Asp	Glu	Ala	Asn
	95							100						105
Gln	Arg	Ala	Thr	Lys	Met	Leu	Gly	Ser	Gly	Cys				
	110							115						

<210> 12

<211> 116

<212> PRT

<213> Artificial sequence

<220>

<223> synthetic peptide chosen such that it is cleaved by

BoNT E

<220>

<221> misc\_feature

<222> 1

<223> Xaa at 1 is S-fluoresceinyl-cysteine

<400> 12

Xaa	Asn	Lys	Leu	Lys	Ser	Ser	Asp	Ala	Tyr	Lys	Lys	Ala	Trp	Gly
1				5					10					15
Asn	Asn	Gln	Asp	Gly	Val	Val	Ala	Ser	Gln	Pro	Ala	Arg	Val	Val
				20					25					30
Asp	Glu	Arg	Glu	Gln	Met	Ala	Ile	Ser	Gly	Gly	Phe	Ile	Arg	Arg

	35		40		45									
Val	Thr	Asn	Asp	Ala	Arg	Glu	Asn	Glu	Met	Asp	Glu	Asn	Leu	Glu
				50					55					60
Gln	Val	Ser	Gly	Ile	Ile	Gly	Asn	Leu	Arg	His	Met	Ala	Leu	Asp
				65					70					75
Met	Gly	Asn	Glu	Ile	Asp	Thr	Gln	Asn	Arg	Gln	Ile	Asp	Arg	Ile
				80					85					90
Met	Glu	Lys	Ala	Asp	Ser	Asn	Lys	Thr	Arg	Ile	Asp	Glu	Ala	Asn
				95					100					105
Gln	Ala	Ala	Thr	Lys	Met	Leu	Gly	Ser	Gly	Cys				
				110					115					